

REMARKS

The Official Action mailed February 28, 2003 has been received and its contents carefully noted. Filed concurrently herewith is a *Request for One Month Extension of Time*, which extends the shortened statutory period for response to June 28, 2003. Accordingly, Applicant respectfully submits that this response is being timely filed.

Claims 1-10 and 12-56 were pending in the present application. Claims 34 and 45 have been canceled and claims 36-38, 40-41, 47-49 and 51-52 have been amended. Claims 1-10, 12-30 and 54 have been withdrawn from consideration. Therefore, claims 1-10, 12-33, 35-44 and 46-56 are now pending in the present application, of which claims 1, 10, 19, 31 and 43 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance.

Paragraph 4 of the Official Action objects to claims 36-38, 40-41, 45, 47-49, and 51-52 in that the preamble of independent claim 31 recites "A semiconductor device" not --a contact structure--. As noted in the Official Action, this occurred from a typographical oversight and the claims are amended herewith to delete "a contact structure" and recite "A semiconductor device." With these amendments, the claim objection is believed to be overcome and reconsideration is requested.

Paragraph 6 of the Official Action rejects claims 34 and 45 under 35 U.S.C. 112, first paragraph as containing subject matter which was not described in the specification in such a way to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In response, claims 34 and 45 are cancelled herewith and thus this rejection is moot.

Paragraph 8 of the Official Action rejects claims 31-35, 39, 42, and 55 as obvious based on the combination of U.S. Patent 6,169,593 to Kanaya and JP 9-251996 to Yamazaki. Paragraph 9 of the Official Action further rejects claims 31-33, 35-37, 42, and 55 as obvious based on the combination of U.S. Patent 5,636,329 to Sukegawa and Yamazaki. Paragraph 10 of the Official Action also rejects claims 31-33, 35-37, 39, 42, and 55 as obvious based on the combination of U.S. Patent 5,608,559 to Inada and Yamazaki. The remaining rejections are based on at least one of Kanaya, Sukegawa, Inada in combination with Yamazaki '996. In each case, it is respectfully submitted that

the Official Action has failed to establish a *prima facie* case of obviousness for the reasons set forth below and reconsideration is requested.

As stated in MPEP § 2143-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

All of the rejected claims are rejected based on the combination of one of Kanaya, Sukegawa and Inada with at least Yamazaki et al. (JP 9-251996). The Official Action contends that it would have been obvious to form the connecting wiring of one of Kanaya, Sukegawa and Inada to have a tapered shape, as taught in Yamazaki '996 because Yamazaki '996 teach that tapering is conventional and required to improve step coverage. However, as noted by the Examiner in the Official Action, Yamazaki '996 in fact only teaches that contact holes are conventionally required to be tapered to improve the step coverage of upper-layer wiring lines at contact holes (paragraph [0003] first sentence). Yamazaki '996 does not teach a tapered shape wiring as recited in the pending claims and as shown in Fig. 21F of the subject application. Therefore, the prior art of record, whether taken alone or in combination, fails to teach each and every limitations recited in the claims such that a *prima facie* case of obviousness cannot be maintained. Furthermore, there has been an insufficient showing that one of skill in the

art would have been motivated to combine and/or modify the reference teachings to achieve the present invention in that the prior fails to disclose or suggest a wiring having a tapered shape. Favorable reconsideration is requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact Applicant's undersigned attorney at the telephone number listed below.

Respectfully submitted,



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